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The Asian Financial Crisis in Retrospect

What Happened? What Can We Conclude?

This memorandum provides an overview of the Asian financial crisis of 1997-98. It reviews its evolution, causes, and consequences and examines the reaction by (inter)national policymakers.

Macroeconomic indicators were deteriorating before the crisis, but it is debatable whether that alone can explain the severity and spread of the crisis. One group of observers have argued that the root of the crisis lies in fundamental economic weaknesses; others have claimed that East Asia fell prey to a sudden shift in investor confidence.

The effects of the Asian crisis have not been limited to East Asia: the crisis has had far-reaching consequences, particularly for some other emerging market economies. The advanced economies and China, in contrast, have weathered the crisis quite well.

While the IMF has been criticised for its heavy-handed and intrusive response, recovery was fairly rapid in most cases. Yet, although the most-heavily affected countries have made progress with financial and corporate reforms, much remains to be done before this process is complete.

Like the crises that preceded and followed the Asian financial crisis, the events in Asia demonstrate the need to strengthen the international financial architecture.

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1 Introduction

In 1993 the Worldbank, celebrating the outstanding performance of eight Asian economies, coined the term 'The Asian Miracle'. Less than five years later, four of these economies (Indonesia, Malaysia, Korea, and Thailand) and the Philippines found themselves in one of the sharpest economic crises of the last decades.[1] Many have wondered whether this marked the end of the Asian miracle; some have even questioned its very existence.

Unlike previous crises, the Asian crisis was not caused by macroeconomic policies that were incompatible with the maintenance of a fixed exchange rate (as in first-generation models of financial crises). Nor was it merely the result of self-fulfilling expectations (second-generation models). Rather, the Asian crisis stood model for a third generation of financial crisis literature, which concentrates on moral hazard problems, financial fragilities, and weaknesses in corporate balance sheets, and incorporates the contagion of crises.

The Asian crisis was virtually unpredicted and, once manifest, its severity underestimated by policymakers. The scale of the crisis has been remarkable. What started out as a currency crisis in Thailand quickly developed into a full-blown financial crisis of regional and international proportions.

Not surprisingly, the Asian financial crisis has been the inspiration for a vast array of literature on its origins, consequences, and ramifications for policy making. It has also given new impetus to the debate on the global financial architecture in general and the role of the IMF in particular. And, with new publications appearing regularly,[2] the Asian crisis is still a topical subject. Not only has it become a reference point for East Asia's economic performance, it has also defined a new thinking on crisis prevention and management.

This memorandum gives an overview of the Asian financial crisis. Although it seeks to be comprehensive, it does not purport to be exhaustive. The remainder of this study is organised as follows. The next section reviews the eve, onset, and spread of the crisis. Section 3 provides an overview of the causes of the crisis, while section 4 analyses its consequences. This is followed by an examination of the policy response in section 5. Section 6 subsequently assesses whether the crisis countries have made a complete recovery and section 7 draws some important lessons. Finally, section 8 concludes this memorandum.

[1] In what follows, these five most affected economies will also be called *Asia-5*.

[2] To name but two: see Krueger (2004) and Willett *et al*. (2004).

2 Evolution

This section provides an account of how the Asian crisis unfolded.[3] Point of departure is the situation before the crisis. While the Thai and Korean economies were experiencing a serious deterioration of economic fundamentals, the outlook for Indonesia, Malaysia, and the Philippines was not particularly gloomy. The analysis then turns to July 2, 1997, when Thailand abandoned its *de facto* exchange rate peg to the US dollar. From this date onwards the situation worsened sharply as the Thai crisis engulfed much of East Asia, and spilled over to other parts of the world.

2.1 The Run-Up to the Crisis

The extent of financial and macroeconomic problems prior to the crisis varied across the Asia-5 countries. While all countries were afflicted with a certain degree of frailty, ***Thailand*** appeared to be in an especially bad shape. Macroeconomic conditions were deteriorating markedly during the first half of the 1990s, with widening current account deficits (table 2.1) and increasing short-term foreign indebtedness (table 3.3). The increasingly open capital account and the false sense of security provided by the pegged exchange rate had induced large, mainly short-term capital inflows (table 3.1). These, in turn, stood at the basis of a rapid lending boom (table 3.2). The surge in capital inflows also generated large unhedged foreign exchange positions in the corporate and financial sectors, which had thus become increasingly fragile.

Confidence ebbed when exports slowed sharply during 1996. Capital inflows subsequently decelerated and the Thai baht suffered a number of speculative attacks after July 1996, reflecting intensifying concerns about the sustainability of the *de facto* US dollar peg.

Table 2.1 Current Account (% GDP)

	Indonesia	Malaysia	Philippines	Rep. of Korea	Thailand
1992	-2.0	-3.7	-1.6	-1.3	-5.5
1993	-1.3	-4.6	-5.5	0.3	-4.9
1994	-1.6	-7.6	-4.6	-1.0	-5.4
1995	-3.2	-9.8	-4.4	-1.7	-7.9
1996	-3.4	-4.4	-4.8	-4.4	-7.9

Source: ADB, *Key Indicators*, 2003.

[3] See Berg (2001) and Corsetti *et al.* (1998b) for a detailed reconstruction of the Asian crisis. This section draws heavily on these publications. IMF (1997) also provides a good account of the run-up to the crisis and its subsequent evolution. See ADB (1998), Baig and Goldfajn (1998), and IMF (1998a) for a chronology of major events during the Asian financial crisis. ADB (1999) summarizes the evolution of the crisis during 1998.

The government initially responded by supporting the currency through large spot and forward interventions, before introducing capital and exchange controls in May 1997. These measures proved inadequate, however, and in a final effort to stem the downward pressure on the baht, short-term interest rates were raised in June 1997. However, Thailand was forced to let its currency float on July 2. The baht dropped sharply in the ensuing weeks, raising doubts about the sustainability of exchange rate arrangements elsewhere in the region.

Korea also experienced a serious worsening in its economic situation prior to the Asian crisis. Exports growth fell significantly and the current account deficit widened dramatically during 1996, compounding a massive build-up of short-term debt. However, Korea's more flexible exchange rate arrangement (the won had been allowed to depreciate against the dollar) and its relatively closed financial sector had made the immediate risk of a speculative attack less likely (IMF, 1997). Yet problems were mounting in the corporate sector. Large Korean conglomerates (*chaebols*) were reporting deteriorating profitability, thereby creating fears about possible bankruptcies. Stock markets fell sharply as a result. A number of *chaebols* went bankrupt in early 1997, which exacerbated the fragile state of the banking system.

Indonesia's problems were of a different nature. The country had experienced an acceleration of growth during 1995, which had caused concerns about overheating. The Bank of Indonesia aimed at dampening domestic demand, yet was reluctant to increase interest rates significantly, for fear of attracting additional capital flows. This lead to serious doubts about the government's commitment to tackle Indonesia's growing problems. The situation did improve during 1996, however, and despite rising levels of short-term foreign debt, Indonesia appeared to be in a relatively good shape mid-1997.

There were also concerns for overheating in ***Malaysia***, particularly in view of the surge in public investment during 1995, which was mainly spent on large infrastructure projects. By the end of 1996, however, with the decline in the current account deficit, these worries had abated. Of far greater concern were the effects of the shift in market sentiment towards Malaysia as an attractive investment opportunity. Short-term capital inflows surged, bank lending increased sharply, and the availability of loans fuelled an asset (especially property) price boom. Yet, apart from a widening current account deficit during 1992-95 and slowing exports, the Malaysian economy looked relatively strong and displayed none of the sort of external debt problems that were present in Thailand and Korea.

Economic conditions in the ***Philippines*** also appeared sound compared to other economies in the region. Although the amount of short-term external debt was fairly high, there was no immediate risk that these loans would not be rolled over. However, some notes of concern

appear justified, in particular regarding the large current account deficit and the rapid lending boom, which had fed increasingly risky investment projects.

2.2 The Onset of the Crisis and its Spread

The Thai baht depreciated sharply after its peg was abandoned (figure 2.1). Investors also became more critical of fragilities in neighbouring countries. Both the Philippine peso and the Malaysian ringgit came under speculative pressure and were allowed to float on July 11 and July 14 respectively. In Indonesia, the rupiah came under pressure and fell sharply within its widened intervention band. Interest rates were raised steeply, yet the Indonesian exchange rate arrangements appeared unviable, and on August 14 the Indonesian authorities also allowed the currency to float.

The Southeast Asian currencies continued to fall during August and September. By the end of September, the baht had depreciated by 43%, the rupiah by 37%, the ringgit by 26%, and the peso by 29%.[4] This sequence of depreciations adversely affected other currencies in the region. The Singapore dollar, for instance, fell in response to the plunge of the ringgit. Market pressures also mounted in Taiwan in October, largely fed by concerns about a loss of competitiveness against the continuously depreciating currencies of its Southeast Asian competitors. In light of these developments, the Taiwanese authorities decided to let the currency float, which prompted a 5% depreciation on October 20. This in turn raised speculations about the sustainability of exchange rate arrangements in Hong Kong which had experienced a significant real appreciation. Market participants expected that the fixed parity to the US dollar (currency board) would be abandoned, but the authorities, by drastically increasing interest rates, were successful in withstanding a collapse of the currency. Strong adverse effect on equity markets, however, could not be avoided. During October 20-23, the Hang Seng Index lost 23% of its value, its heaviest loss ever.

This time, the spillover effects were not limited to Asia. Following the crash in Hong Kong, the Dow Jones dropped by 7% on October 27. The crisis also spread to Latin America where Brazilian, Argentine, and Mexican authorities raised interest rates to defend local currencies. Similarly, interest rates were raised in Greece, Russia, and the Ukraine.

Although the Korean won had so far been spared from speculative attacks, it was facing growing pressures after the depreciation of the Taiwanese dollar and collapse of the Hong Kong stock market. Moreover, Korea had suffered a significant loss in competitiveness as a result of the depreciations of the Thai baht and the Singapore dollar and the economy had already been in a dire state prior to the onset of the Asian crisis. Korea abandoned the defense of the won on

[4] Depreciations (local currency value of US dollar) are relative to the end of December 1996.

November 17, which caused the currency to plummet. Due to the importance of the Korean economy, the fall in the won set in motion a new wave of devaluations of Southeast Asian currencies.

Contagion during the Asian financial crisis: theory and practice

Contagion is, broadly defined, the cross-country transmission of shocks.[a] There are various channels through which these spillover effects can take place. First, shocks can be transmitted through **fundamental linkages** among countries. For instance, countries are connected through *real* fundamental links, which include trade and FDI relationships. If one country experiences a financial crisis, its major trading partners may feel the impact through lower import demand from the crisis country. The crisis may also be transmitted through a spiral of competitive devaluations between the crisis country and its major trading partners and competitors.

A second type of fundamental linkages results from interconnectedness through the international financial system. These *financial* effects result from the behaviour of, for instance, institutional investors, who, faced with sudden withdrawals by their clients, decide to liquidate part of their portfolio. They usually cash-in on their investments in countries that have not yet been affected by the initial shock (but seem vulnerable), thereby transmitting the crisis to third countries.

Occasionally, the contagion effects of a crisis cannot be explained by fundamental linkages alone. In those cases the spread of a crisis is often attributed to **herding behaviour**. When individual investors have insufficient information about fundamentals in different markets, they may infer from the behaviour of the rest of the market that something is afoot, and hence follow the herd. Investor perceptions can thus transmit a crisis from one country to the next, even though no real or financial linkages exist between the two economies.

Which of these factors have been important during the Asian financial crisis? Kawai *et al.* (2001) point out that intra-regional trade among the crisis countries is high and has probably accelerated the process of contagion. However, they also argue that trade and foreign investment linkages between Korea and Thailand are rather weak and that the speed with which the crisis spread through East Asia was beyond that can be explained by real linkages. They thus conclude that real fundamental linkages do not appear to have been a dominant channel of contagion.
Financial linkages, on the other hand, do appear to have played an important role in transmitting the crisis. International banks reduced their exposure to other countries in the region and emerging economies in general, thereby propagating the effects across markets.
Finally, Kawai *et al.* (2001) argue that herding behaviour has been very prominent in the cross-country transmission of the Thai crisis. Contagion was driven by changing investor sentiments and perceptions, and resulted in a panic-fuelled run on other currencies. Fundamental relationships among countries cannot explain these spillover effects.

[a] The Worldbank is an excellent source for further material on contagion. This box is based on the framework provided by the Worldbank. See http://www1.worldbank.org/economicpolicy/managing%20volatility/contagion/index.html**.**

Since most of their loans represented unhedged foreign currency exposures, the debt burden of Korean and Indonesian banks and corporations was severely worsened by the continued depreciation of their currencies. Problems were exacerbated by a high perceived risk of

bankruptcy, which made creditors reluctant to roll over their loans. A financial panic followed in Korea in December culminating in a breakdown of the won.[5] In January 1998, the Indonesian rupiah also gave way, which made it increasingly difficult for domestic firms to service their foreign debt. At the end of January 1998 the rupiah was about 325% below its June 1997 value.[6] Over that same period, the Thai baht had depreciated by about 113%, the ringgit and won by 82% and 71% respectively, and the peso by 61%.

For most countries the situation began to make a turn for the better at the start of 1998, aided in part by IMF-supported adjustment programmes. Fears of default in Korea receded after an agreement was reached with creditors to restructure part of its debt. Thailand made progress with its IMF-supported financial restructuring programme, which contributed to a strong recovery of the baht. The Malaysian and Philippine currencies also strengthened during the first months of 1998. The Indonesian rupiah, in contrast, weakened sharply amid widespread loan defaults and bankruptcies. The situation improved during March and April when the country reached new agreements on economic reform and bank restructuring.

This revival was short-lived, however, as economic recovery in Indonesia was compromised by growing political and social unrest, and Japan's economic woes had a negative impact on the rest of Asia. The falling yen dragged down other Asian currencies and stock markets, again shattering investor confidence.[7] The situation intensified on August 17 when Russia devalued the rouble and effectively defaulted on its domestic government debt.

With a strong rebound in currencies and stock markets the outlook improved substantially towards the end of 1998. By the beginning of 1999, observers were cautiously optimistic as the Asian economies appeared to have stabilised.

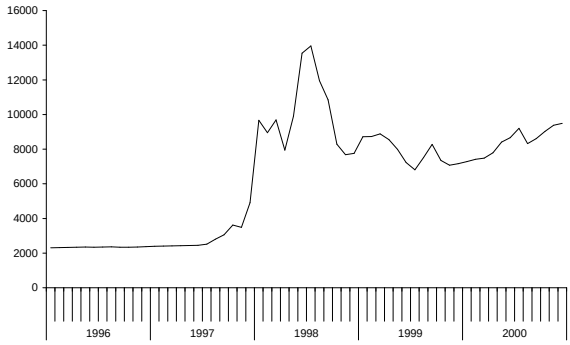
[5] The won collapsed by 35% in a single week and by over 45% during December.

[6] Local currency value of US dollar.

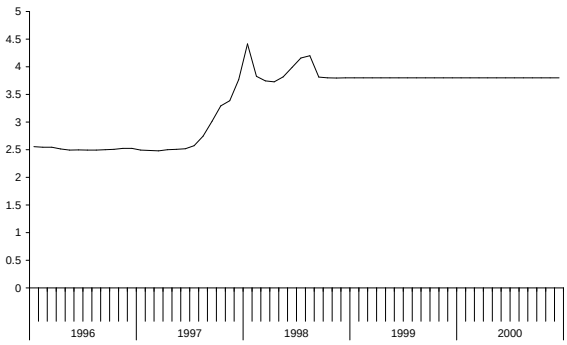
[7] IMF (1998a) reports that the Korean stock market index fell to an 11-year low on May 26, and that the Thai stock market index fell to a 10-year low on June 1.

Figure 2.1 Exchange rates (domestic currency value of US dollar)

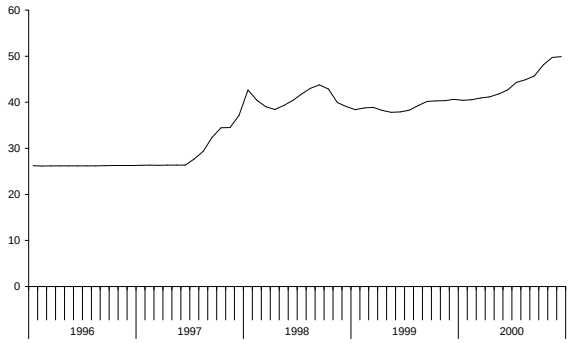
Indonesia



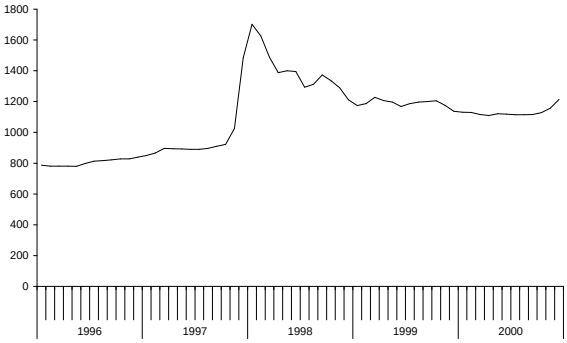
Malaysia



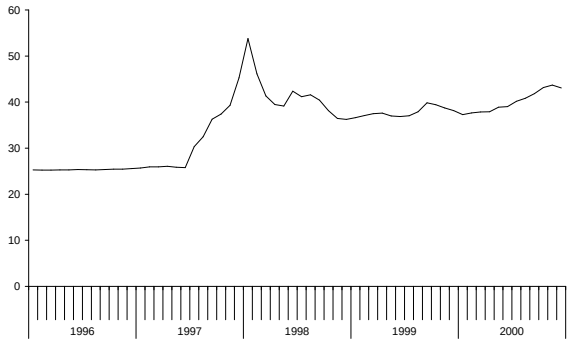
Philippines



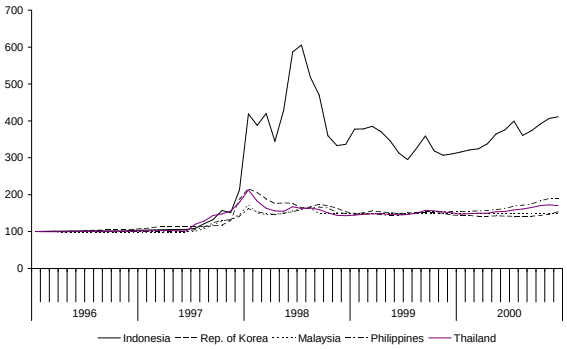
Republic of Korea



Thailand



Asia-5 (January 1996 = 100)



3 Causes

Several explanations of the Asian crisis have been put forward. These broadly speaking, centre on two hypotheses. The first set of explanations claims that poor fundamentals and structural weaknesses were at the root of the crisis. Fundamental imbalances and inadequately regulated domestic financial markets created a situation that proved unsustainable.

The second set of explanations posits that the crisis was the result of a sudden shift in investor sentiment, unrelated to economic fundamentals. This interpretation views the Asian financial crisis as an example of a financial panic in which the self-fulfilling pessimism of international lenders caused liquidity problems in the affected countries' financial systems.

These interpretations are not mutually exclusive. Some observers have combined the two hypotheses stressing that the economies' fundamental weaknesses increased their vulnerability to financial market panics. This section provides an overview of the main arguments used in this debate.[8]

3.1 Fundamentals

According to the fundamentals view, basic economic weaknesses and policy inconsistencies were at the origin of the financial crisis in 1997. Many of these shortcomings were masked by East Asia's strong performance over the previous decades. Yet below the surface, several factors did—in retrospect—provide cause for alarm. First, on a microeconomic level, several financial sector weaknesses appear to have played a significant role in the onset of the Asian crisis. Liberalisation of financial markets in the early 1990s led to a rapid expansion of financial services and a surge in capital flows (table 3.1) which made the East Asian economies increasingly vulnerable to the potential instability of international financial markets.[9] Domestic financial markets were also fragile due to a lack of financial oversight, since regulation and supervision of financial institutions had failed to keep pace with the rate of financial reform.

[8] For an exposition of the 'fundamentals' view, see for instance ADB (1999), Corsetti *et al.* (1998a), IMF (1997, 1998b), and Lane *et al.* (1999). The 'financial panic' view is supported by Radelet and Sachs (1998a, 1998b). Refer to Berg (1999) and Corbett and Vines (1998) for an account of the 'hybrid' view. Willett *et al.* (2004) invalidate four hypotheses about the Asian crisis. They argue that neither portfolio investors nor moral hazard were the primary force behind the crisis. Moreover, they refute the hypotheses that herding behaviour by portfolio investors was a major channel of contagion, and that pattern of contagion can be explained by the presence of a common lender (Japan).

[9] In his polemic *Globalization and its Discontents*, Stiglitz (2002, p. 99) argues that "capital account liberalization was the single most important factor leading to the [Asian financial] crisis". For a discussion of East Asia's financial sector weaknesses see for instance Berg (1999), Corsetti *et al.* (1998a), and Glick (1998).

Table 3.1 Asia-5: Net Capital Flows, 1991-2000 (billions of US dollars)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000[a]
Net private capital flows[b]	24.8	29.0	31.8	36.1	60.6	62.9	-22.1	-29.6	-18.1	-8.2
Net direct investment	6.2	7.3	7.6	8.8	7.5	8.4	10.3	9.7	9.4	8.4
Net portfolio investment	3.2	6.4	17.2	9.9	17.4	20.3	12.9	-7.3	4.5	5.6
Other net investment	15.4	15.3	7.0	17.4	35.7	34.2	-45.3	-32.0	-32.0	-22.2
Net official flows	4.4	2.0	0.6	0.3	0.7	-4.6	30.4	20.2	-4.5	-0.6
Change in reserves[c]	-8.3	-18.1	-20.6	-6.1	-18.3	-5.4	30.5	-52.1	-39.9	-29.9

[a] Estimate
[b] Because of data limitations, "other investment" may include some official flows.
[c] A minus sign indicates an increase.
Source: IMF, *World Economic Outlook*, October 1999.

The tremendous increase in private capital inflows fuelled a domestic lending boom (table 3.2) and contributed to the emergence of significant asset price bubbles, such as a real estate bubble in Thailand. Since many of these assets were used as collateral against bank loans, many banks found themselves in an especially vulnerable position.

Given the relatively underdeveloped bond and equity markets, most of the capital inflows were intermediated through the banking system. A large share of these capital flows consisted of private short-term unhedged loans. These foreign currency-denominated loans were used to finance domestic long-term investments (liability dollarisation). This created serious maturity and currency mismatches, which made domestic banks increasingly vulnerable to changes in exchange rates and interest rates. It also made these countries susceptible to self-fulfilling 'bank runs', in which fears about other creditors pulling out their money cause each individual creditor to withdraw its loans (Lane *et al.,* 1999).

The traditional close operational relationship between banks and firms in Asia had made Asian corporations heavily dependent on debt financing. The additional foreign credit that became available as a result of the financial liberalisation process during the 1990s added to the already extremely high leverage of East Asian firms, thereby exacerbating their financial fragility.

Table 3.2 Real Bank Credit Growth (%)

	Indonesia	Malaysia	Philippines	Rep. of Korea	Thailand
1991-94 (average)	10.2	9.7	15.1	9.7	18.7
1995	13.3	26.5	31.8	10.3	15.6
1996	14.0	22.3	38.8	14.4	9.0
1997	17.2	20.2	20.2	14.4	14.7
1998	-25.4	-2.3	-15.5	4.3	-13.4
1999	-56.7	-0.6	-6.3	18.9	-4.8
2000-02 (average)	5.4	4.4	-2.9	14.0	-4.0

Source: Asia Recovery Information Center

On top of the financial deregulation process, several other factors stimulated the surge of capital flows into East Asia. For instance, low interest rates and excess liquidity in the major industrialised economies favoured investment into emerging markets (Corsetti *et al.*, 1998). Moreover, Asia's strong economic performance had made foreign investors increasingly confident in the region's prospects. Government guarantees (both implicit and explicit) of bank liabilities and *de facto* fixed exchange rates enhanced this perceived sense of security and encouraged moral hazard on the part of both borrowers and lenders (Corsetti *et al.*, 1998a; ADB, 1998). This contributed to the heavy dependence on foreign debt and its associated risks.[10]

Several signs of growing risk on a macroeconomic level intensified these microeconomic vulnerabilities. Several observers have focused on the growing current account deficits (table 2.1).[11] These widening external deficits were the result of appreciating real exchange rates and slowing exports growth. Those Asian economies that had effectively pegged their exchange rates to the US dollar suffered a loss in competitiveness when the dollar appreciated against the Japanese yen and major European currencies. Exports growth was also adversely affected by the stagnation of the Japanese economy and a shift of comparative advantage towards China. The problem of export slowdown was further compounded by a sharp decline in the prices of key export commodities (ADB, 1998).

In sum, macroeconomic and financial fragilities had exposed the Asian economies to a number of risks (Kawai *et al.*, 2001). Widening current account deficits, which were primarily financed by short-term unhedged private credit, had led to an increasing vulnerability to a sudden reversal of these capital flows. Such a sudden outflow of capital could have serious balance sheet effects (ADB, 1998). On the one hand, the ensuing currency depreciation would increase the burden of foreign currency denominated debt. On the other hand, the outflow of capital would deflate asset prices and thereby diminish the value of the banks' collateral.

In addition, financial weaknesses had induced high and growing leverage and sizeable currency and maturity mismatches, which exposed banks and corporations to interest and exchange rate shocks. Once economic growth slowed and concerns about these financial sector imbalances started to rise, capital flows did in fact reverse. This, in turn, intensified doubts about the sustainability of Thailand's exchange rate peg and increased the probability of a successful speculative attack (ADB, 1998).

[10] The IMF (1997), in contrast, argues that moral hazard did not play any significant role in motivating capital flows into East Asia. Willett *et al.* (2004) argue that there can be little doubt that moral hazard played a role, but that it goes too far to accept it as a complete explanation of the Asian crisis.

[11] See for instance Berg (2001, Corsetti *et al.* (1998a), and Glick (1998).

3.2 Financial Panic

The proponents of the financial panic view argue that East Asia fell prey to a sudden shift in confidence of international investors which led to a disruption of capital flows into Asia. According to this interpretation, the subsequent runs on domestic financial systems cannot be explained by poor fundamentals or policy failures, but are instead a reflection of the intrinsic instability of international financial markets. As individual creditors withdraw their loans in response to growing pessimism about the ability of debtors to repay their short-term liabilities, they create a self-fulfilling panic that produces market outcomes that are much more severe than warranted by fundamental imbalances alone.

Creditors may panic at the realisation that international reserves are insufficient to cover all short-term debt. Table 3.3 shows how the build-up of huge amounts of short-term debt had made the Asian economies increasingly vulnerable to such a sudden withdrawal of funds.

Table 3.3 Short-Term Debt (% international reserves)

	Indonesia	Malaysia	Philippines	Korea	Korea (adjusted)[a]	Thailand
1992	158.5	21.0	98.5	69.5	…	69.5
1993	145.6	25.4	85.0	60.2	199.1	89.0
1994	147.4	24.2	80.3	123.1	227.6	96.4
1995	175.6	30.4	67.9	142.5	240.7	119.4
1996	167.6	40.8	67.9	195.4	340.2	123.5
1997	188.9	71.5	135.0	263.6	751.6[b]	140.7

[a] Adjusted for *usable* reserves and IMF staff estimates of short-term debt.
[b] December 1997
Sources: ADB, *Key Indicators*, 2003, except for the adjusted data for Korea which were drawn from Berg (1999).

Radelet and Sachs (1998a, 1998b) emphasise the role of financial panics as a crucial element in the onset of the Asian financial crisis. They point out several features of the crisis that are consistent with this interpretation. For instance, they argue the crisis was largely unanticipated.[12] The Asian economies had been highly successful in the years preceding the

[12] Whether the Thai crisis was anticipated or not is still an open question. Standard & Poor's left its credit rating unchanged during the twelve months leading up to the Thai currency crisis. The IMF concluded its Article IV consultation with Thailand in July 1996. The Fund's appraisal of Thailand's economy is somewhat ambiguous (also see De Jong, 1998). In its *Annual Report 1997* (pp. 91-92) the IMF writes: "Directors strongly praised Thailand's remarkable economic performance and the authorities' consistent record of sound macroeconomic policies. (…) The stability of the baht had served the Thai economy well in the past, but Directors recommended a greater degree of exchange rate flexibility to improve monetary autonomy and to reduce the incentive for capital inflows. (…) The recent increase in the current account deficit had increased Thailand's vulnerability to economic shocks and adverse shifts in market sentiment. On the one hand (…) economic fundamentals remained generally very strong (…). On the other hand, the level of short-term capital inflows and short-term debt were somewhat high. Also, the limitations of present policy instruments constrained the authorities' ability to manage shocks. (…)

crisis, which suggests there was nothing inherently wrong. Radelet and Sachs (1998b) also argue that it is difficult to attribute the suddenness and speed with which capital fled the region to a deterioration of underlying economic fundamentals. In fact, international lenders continued to provide funds up to the very brink of the crisis in mid-1997.

3.3 A hybrid explanation

Whether the Asian financial crisis was caused by poor economic fundamentals or a sudden shock to investor sentiment is still debated. In an effort to resolve this issue, several observers have offered an alternative approach that combines elements of both explanations. According to this hybrid explanation, structural deficiencies and financial vulnerabilities had made the Asian economies extremely exposed to changes in investor confidence. To explain the cause of the crisis merely in terms of a financial panic would be to ignore the evidently deteriorating fundamentals. Yet the severity and spread of the crisis cannot be explained by economic weaknesses alone. The contagion that followed the collapse of the Thai Baht in July 1997 clearly suggests a change in investor sentiment. Indeed, as Kawai *et al.* (2001, p. 15) maintain: "if the crisis had (…) been confined to East Asia, then the view that the domestic macroeconomic disequilibria combined with domestic structural weaknesses was the primary cause of the crisis might have dominated the Radelet-Sachs view that investor panic was the primary cause."

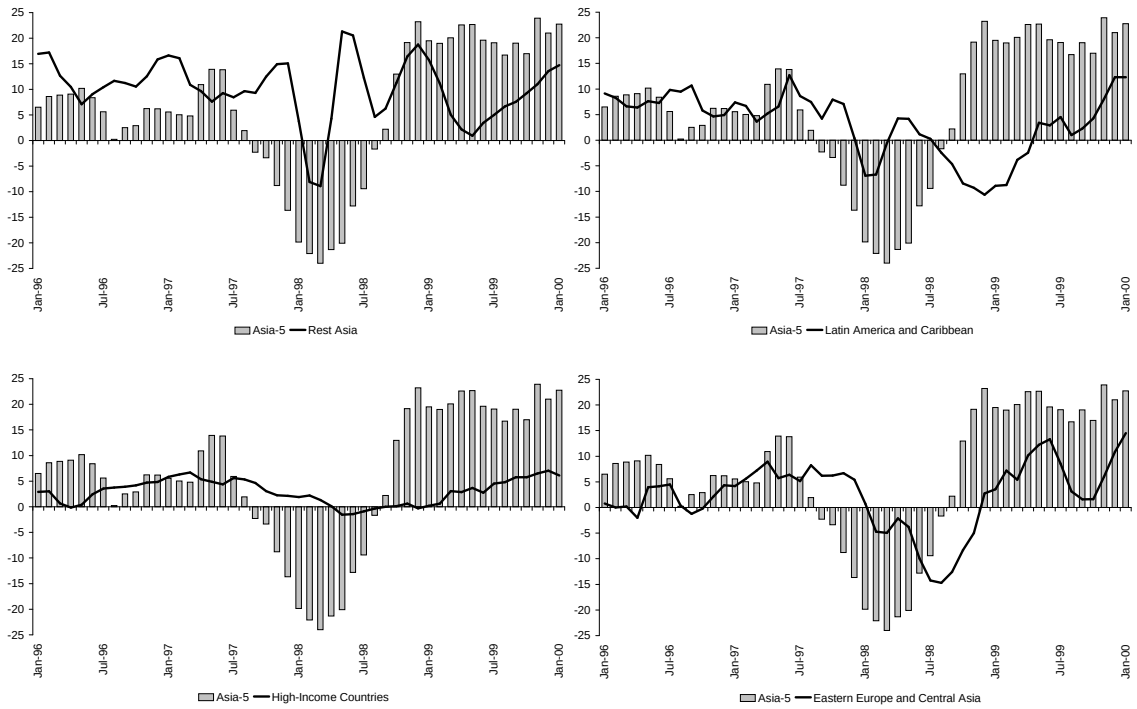
As Glick (1998) points out, it is hard in practice to distinguish between confidence shocks and fundamental weaknesses, since investor sentiment depends on the perception and expectation of economic fundamentals. Weak fundamentals and massive inflows of foreign capital to some extent increase susceptibility to a crisis, but they do not necessarily imply that a crisis will occur. However, when a crisis has been triggered by poor economic fundamentals, it may quickly take the form of a panic, if individual investors re-evaluate their stakes and collectively withdraw their funds.

[E]arly action was required to reduce the current account deficit. (…) [Directors] encouraged the authorities to maintain and strengthen the momentum of reform, particularly in the financial and trade sectors, and recommended a further strengthening of supervision of the banking sector."

4 Consequences

This section provides an overview of the repercussions of the Asian financial crisis. The effects of the crisis were being felt not only in Southeast Asia; other developing and transition economies were also adversely affected by the financial turmoil. The sharp decline in imports by Asia-5 led to a significant slowdown in the growth of world trade in 1998, and thus made the Asian crisis a global issue. The average price of petroleum fell by 32% during 1998, while the price index for non-fuel commodities dropped by 16%. These price declines can be attributed largely to the Asian crisis and the output decline in Japan. The terms of trade of many developing countries worsened as a result, and this adversely affected real incomes in the developing world. China, in contrast, has remained immune from the effects of the Asian crisis. Advanced economies experienced the impact of the crisis too, albeit to a lesser degree and not always to their detriment. The US terms of trade, for instance, improved during the Asian financial crisis.[13]

Figure 4.1 Industrial Production Growth (%, at annual rates)



[13] Grilli (2002) argues that the positive real income effects resulting from these terms of trade improvements have been important in sustaining buoyant import demand in North America and Europe, thus ensuring a reasonably quick recovery in Asia and other developing regions.

Figure 4.1 shows that other Asian countries, Latin American countries, and particularly Eastern Europe and Russia were severely affected by the Asian crisis. The advanced economies experienced a modest slowdown. These graphs provide a lucid illustration of the spread of the crisis.[14] The slowdown in the other Asian countries is largest in March 1998, at the height of the crisis. The effects of the crisis subsequently spread to Eastern Europe and Russia, which experience their largest contraction in August 1998. Half a year later, in January 1999, industrial production reaches its trough in Latin America.

4.1 Asia-5

For the countries most directly affected, the Asian crisis meant a sharp reversal of economic fortune. The slowdown in economic growth was dramatic and its magnitude was largely unforeseen. Real GDP plunged in 1998 by 13.1% in Indonesia, 10.5% in Thailand, 7.4% in Malaysia, 6.7% in Korea, and 0.6% in the Philippines (figure 4.2). With the exception of the latter two economies, real GDP growth in the crisis countries was still below its 1985-94 average in 1999. The output decline in East Asia was accompanied by a slump in domestic demand, which was in large part the result of a substantial drop in fixed investment and private consumption.

Very prominent has been the sharp decline in private capital inflows (also see table 3.1), and the massive reversal of banking flows in particular. Whereas Asia-5 received a net private capital inflow of $63 billion in 1996, they faced a net outflow of $22 billion in 1997. This reversal in capital flows brought about large adjustments in external current accounts, especially in Malaysia where the current account jumped from a deficit of 5.9% of GDP in 1997 to a surplus of 13.2% in 1998. Similarly, while Thailand had a current account deficit of 2.1% in 1997, it reported a surplus of 12.8% in 1998. A comparable correction took place in Korea. These current account adjustments were the result of a plunge in imports, rather than an expansion of exports.[15] In fact, for the Asia-5 region merchandise exports (in US dollar terms) hardly changed in the first half of 1998, while imports fell by about one-third of their pre-crisis level.

Sharply falling currencies and rising interest rates wreaked havoc on corporate balance sheets with firms finding themselves unable to service their liabilities. Non-performing loans (NPLs) became widespread as a result. Berg (1999) reports figures by JP Morgan and Standard & Poor's that suggest that the peak of NPLs (as a share of total loans) in 1998-99 ranged from

[14] The author is indebted to Gerard van Welzenis for pointing this out and for providing the data. The graphs show the growth rate (at annual rates) of a three-monthly-moving average over the last four months.

[15] Export volumes did increase substantially, but this rise was largely offset by a drop in US dollar prices. The contribution of exports to GDP growth also declined.

10% in the Philippines and around 20% in Malaysia to over 25% in Korea and Thailand and exceeding 40% in Indonesia.

The crisis had significant budgetary consequences. Government finances deteriorated very quickly during the crisis and had not, with the exception of Korea, returned to their pre-crisis levels by 2002. Malaysia, for instance, moved from a budget surplus of 2.4% in 1997 to a budget deficit of 1.8% in 1998. By 2002 the Malaysian government finances had deteriorated to a deficit of 5.6% (figure 4.3).

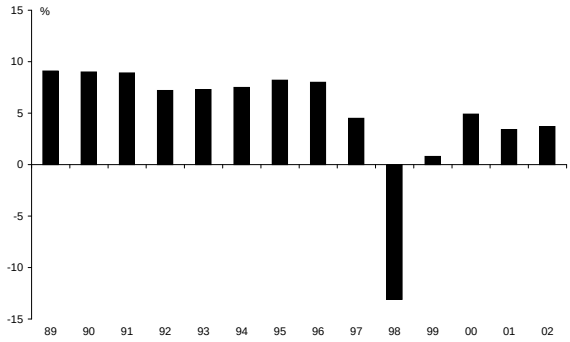
In addition to its significant economic consequences, the Asian financial crisis had dramatic social costs.[16] Un(der)employment rose sharply in Korea and Thailand, while in Indonesia adjustment took place through falling real wages in the formal sector and departing migrant workers. In Indonesia and Korea, the crisis also led to a movement of labour into the low-paying informal sector (Knowles *et al.*, 1999). Prices of basic necessities increased in the wake of the exchange rate depreciations and high inflation rates eroded real wages. As a result, poverty increased substantially, though not as dramatically as initially feared. Existing social safety nets proved inadequate to cushion the impact of the crisis, thus requiring additional measures.

Accompanying the crisis was a shift in the sectoral composition of output (UN, 2003). As a share of GDP, the agricultural sector expanded in Indonesia, Thailand, and Malaysia, at the expense of the services sector and construction industry. Agriculture also gained importance in terms of its share in total employment, whereas manufacturing and construction declined in this respect. While the contribution of the services sector to output dropped, its share of total employment increased in most countries, suggesting that it absorbed many displaced workers from other sectors.

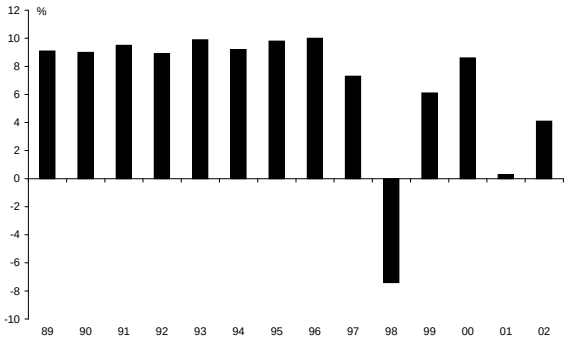
[16] See for instance Manuelyan Atinc and Walton (1998). The crisis was not without political consequences either. First Thailand's Prime Minister Chavalit Yongchaiyudh resigned in November 1997 amid criticism about his inability to tackle the crisis. Indonesian President Suharto stepped down in May 1998 and the Malaysian deputy Prime Minister and finance minister Anwar Ibrahim was fired in September 1998 after criticising Prime Minister Mahathir for imposing capital controls.

Figure 4.2 Real GDP Growth

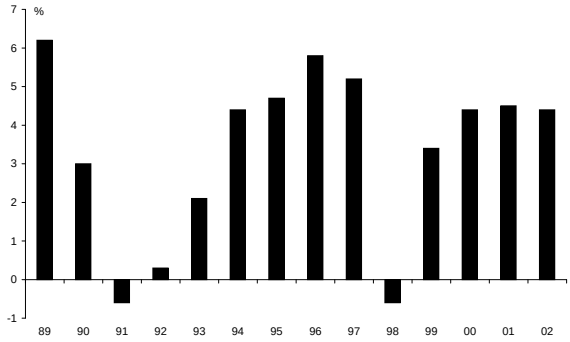
Indonesia



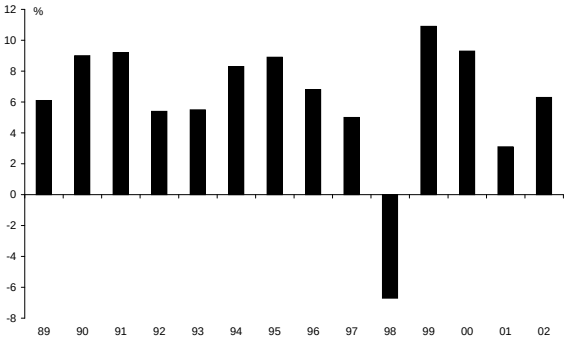
Malaysia



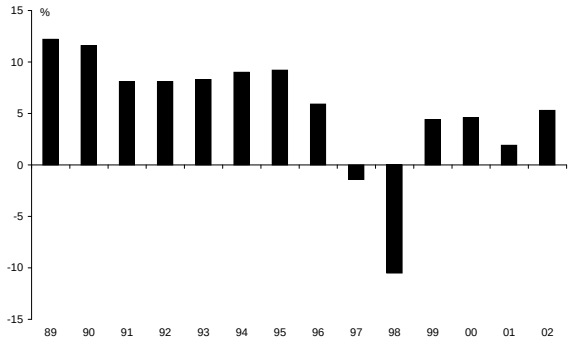
Philippines



Republic of Korea



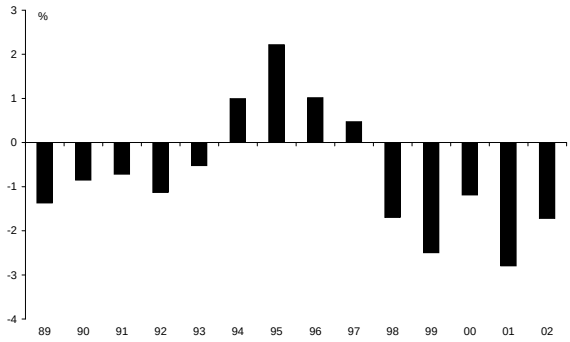
Thailand



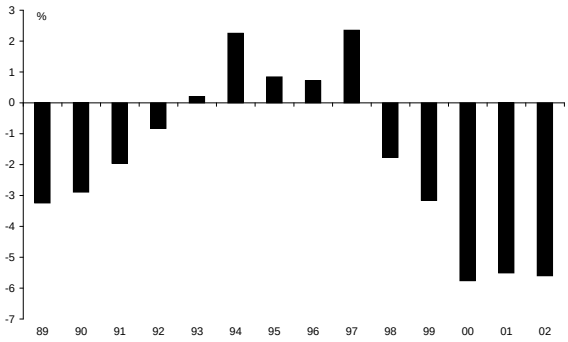
Source: IMF, *World Economic Outlook Database*, September 2003.

Figure 4.3 Fiscal Balance (% GDP)

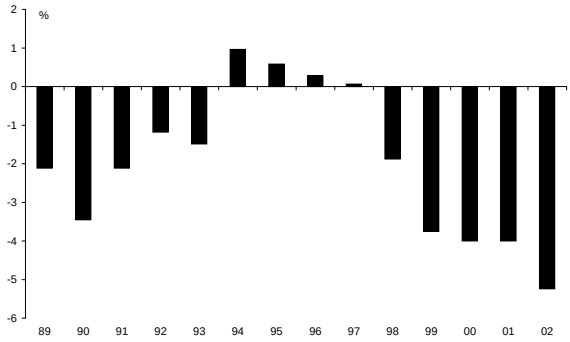
Indonesia



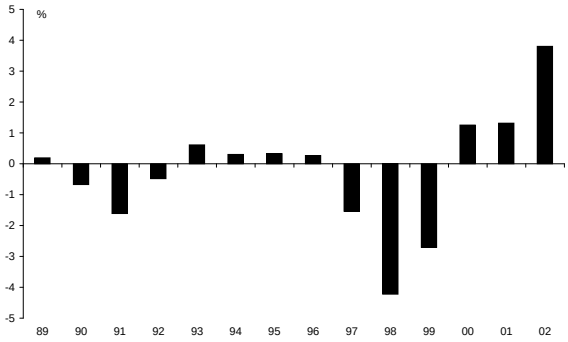
Malaysia



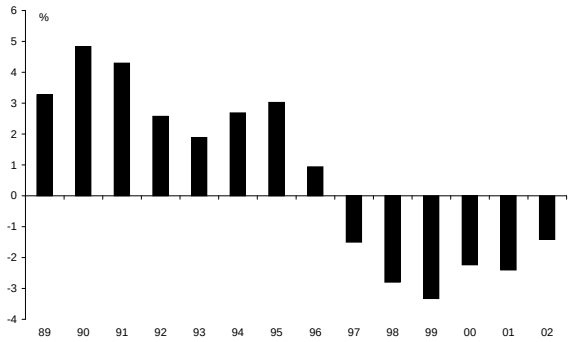
Philippines



Republic of Korea



Thailand



Source: ADB, *Key Indicators*, 2003.

4.2 Other Emerging Economies

With international investors becoming more cautious after the turbulence in East Asia, sentiment towards emerging markets turned increasingly pessimistic. This was reflected in wider yield spreads and reduced access to international credit markets. As mentioned, the Asian crisis also generated significant downward pressures on commodity prices, which led to a deterioration of growth prospects for commodity-based developing countries. As a group, developing countries saw their growth rate fall from 6.6% in 1996 to 3.5% in 1998.

The Asian crisis also hampered the expansion of ***transition economies*** which faced a contraction of 0.9% in 1998. The contagion effects of the crisis became most apparent after the stock market crash in Hong Kong. There are two channels through which the crisis was transmitted to the money and financial markets of Central and Eastern Europe and the Commonwealth of Independent States (Fries, *et al.*, 1998). First, East Asian investors had made considerable investments in these transition economies and started to repatriate their funds in the face of liquidity problems at home. These direct financial linkages were particularly important in transmitting the crisis to Russia. Second, international investors became wary of emerging markets in general and adjusted their portfolios accordingly. Fries, *et al.* (1998) show that within the group of transition economies, Estonia, Romania, Russia, and the Ukraine were particularly strongly affected by the turbulence in East Asia: not only is the average increase in their short-term interest rates markedly higher, the average fall in stock market indices is also significantly larger than that in other transition economies.

Due to the successful implementation of policy reforms and a strong orientation of trade towards North America and Europe, most ***African*** countries endured the spillover effects from Asia quite well. Africa's limited vulnerability to financial shocks can also be attributed to its heavy reliance on long-term official debt, rather than private short-term debt, and its relatively underdeveloped banking system. The crisis has affected Africa mainly indirectly, particularly through its impact on commodity prices and export earnings (IMF, 1999).

The effects of the crisis were also being felt in ***Latin America***.[17] Stock markets in Brazil, Chile, and Peru first suffered a loss shortly after the devaluation of the Thai baht on July 2, 1997. Latin American stock markets received another blow immediately after the crash of the Hong Kong stock market late October 1997. Perry and Lederman (1998) argue that while Chile, Peru, and Brazil were affected by the crisis chiefly through their trade linkages with the crisis region, Brazil was hit also because of its high current account deficit, which was of a similar order of magnitude to that of the crisis countries. Argentina, in particular its stock market, was struck

[17] See Perry and Lederman (1998) for an analysis of the effects of the Asian crisis on Latin America.

because its exchange rate arrangements were similar to those in Hong Kong. Financial spillovers were less significant in other Latin American countries, save for a general deterioration in the terms of access to international capital markets. The slump in commodity markets also played a significant role in transmitting the effects of the Asian crisis to Latin America. Commodity exporters—in particular Chile and Peru (copper) and Venezuela (oil)—experienced considerable trade price effects, and suffered additional falls in their stock markets as a result.

Worldwide, ***oil exporters*** faced declining oil revenues, which weakened their external and fiscal balances and put their foreign reserves under strain. Large terms of trade losses also resulted in a substantial cut in real incomes.[18] In general, falling commodity prices have resulted in a shift of world income from oil-exporting countries to net commodity-importers. The impact on real income of primary commodity exporters has been moderate, since their revenue shortfall was largely compensated by the lower oil prices (IMF, 1999).

4.3 Asian NIEs

As noted in section 2.2, the effects of the crisis also spilled over to ***Hong Kong*** where real GDP growth dwindled from 5.1% in 1997 to -5.0% in 1998. The high degree of openness of its economy is one of the main reasons for Hong Kong's sensitivity to the effects of the crisis. Yet, the IMF (1998c) notes that the recession in Hong Kong can for a large part also be attributed to the tightening of monetary policy that was needed to sustain the peg to the US dollar.

Domestic currencies depreciated significantly and interest rates rose considerably in ***Taiwan*** and ***Singapore***. Spillover effects to the latter two countries were limited due to strong initial conditions and a solid financial sector. Yet, while output growth remained strong in Taiwan (4.6% in 1998), Singapore's GDP growth rate fell from 8.5% in 1997 to -0.9% in 1998.

4.4 Other Advanced Economies

Other advanced economies were influenced by the Asian crisis mainly through international trade linkages.[19] These trade effects sprung from three sources: (i) a collapse in the crisis countries' domestic and regional demand; (ii) exchange rate depreciations in emerging Asia and their effect on competitiveness; and (iii) weak oil and commodity prices and the associated

[18] For instance, as a result of changes in export and import prices, the nominal trade balance of Sub-Saharan African oil exporters fell by 13.3% in 1998. Their terms of trade (in goods) deteriorated by 28.8% and their fiscal balances worsened by about 6 to 7% of GDP.

[19] The following three paragraphs draw from Richardson *et al.* (2000).

terms of trade and income effects. The crisis countries saw their import capacity heavily curtailed and underwent major current account adjustments. The combined Asia-5 current account balance moved from a deficit of $60 billion in 1996 to a surplus of $65 billion in 1998. The major offset to this $125 billion adjustment can be found in the United States whose current account deficit widened by $100 billion over that period.

Matching the import contraction in East Asia, exports from the major advanced economies to the region fell markedly. The United States, for instance, saw its exports to the Asia-5 region fall by about 24% between 1996 and 1998, and both Japan and the European Union saw their exports to East Asia drop by roughly 43%.[20] Imports by the major OECD economies from the crisis region, on the other hand, have remained largely unchanged.

Richardson *et al*. (2000) estimate that the net effect of the Asian crisis on OECD[21] growth in 1998 was roughly 1%. Japan appears to be particularly hit hard, with a 2.7% deviation of real GDP growth from a non-crisis scenario. The United States and European Union, respectively, lost 0.8% and 0.7% of additional real GDP growth in 1998 and half of that in 1999. OECD inflation rates are estimated to have been 0.2% (1998) and 0.9% (1999) lower as a result of the crisis, in line with the slightly negative impact of the crisis on OECD area domestic demand growth. OECD current account balances are reckoned to have been $100 billion higher both in 1998 and 1999 had the crisis not taken place, whilst the overall impact on world trade growth is assessed to have been in the order of 5.3% in 1998.

In general, the impact of the Asian financial crisis on the advanced economies has been fairly limited. Although Japan's economic slump deepened during the financial turmoil, other countries have shown to be resilient. The US economy, in particular, has been able to sustain its growth, aided in large part by the reallocation of financial flows towards 'safe havens' and away from emerging markets. Large capital inflows into the United States have brought down interest rates, thereby supporting domestic demand. The Fed lowered the target federal funds rate by a ¼-point three times during 1998.

4.5 China

China emerged from the crisis relatively unscathed. Although growth was lower than in 1997, with real GDP growing by 7.8% in 1998, China's expansion was hardly disturbed by its neighbours' hardships. The stability of the renminbi's nominal value against the US dollar is further evidence of China's immunity to the 'Asian flu'. Some concern was raised regarding the

[20] This represents a reduction of about 7% of total exports for Japan and 2.5% and 3% for the United States and the European Union respectively.

[21] In this paragraph 'OECD' refers to total OECD *excluding* Korea.

initial appreciation of China's real effective exchange rate and the weakening of its net exports, but these strains were quickly reversed.

Yet China's internal fundamentals were as least as weak, if not worse, than that of the crisis countries. The Chinese banking sector was characterised by poorly regulated domestic banks making inefficient loans. Financial institutions were backed by the government, relationship-banking was common and moral hazard problems abounded. Despite these institutional weaknesses, however, the crisis did not spill over to China.

China's strong performance can be explained by a number of factors. First, its external position was strong both prior to and during the crisis. In contrast to the Asia-5 countries, China was running a current account surplus in 1996. Moreover, its external indebtedness compared very favourably to that of the crisis countries, particularly when measured by the short-term debt to reserve ratio. Second, growth was maintained by a large increase in public investment outlays in mid-1998 and a reduction in interest rates. Third, the maintenance of capital account controls kept speculative investors at bay and prevented any financial market pressures from taking hold. Nevertheless, capital outflows were large during the crisis years and the first years of the post-crisis period, resulting in a capital account deficit.

Fernald and Babson (1999) argue that the explanation of China's undisturbed performance during the crisis should primarily be sought in the strength of China's external fundamentals. Capital controls may well have prevented a destabilising speculative attack on the currency, but China's solid external fundamentals were by themselves sufficient to ward off a self-fulfilling panic. In fact, the merit of the Chinese capital account restrictions lies above all in the fact that they prevented Chinese financial institutions from borrowing excessively abroad, and hence averted a sharp deterioration of external fundamentals.

5 Policy Response

One of the main points of contention has been the way with which the crisis has been dealt. The IMF in particular has been heavily criticised for its harsh and intrusive policy response. This section examines the role played by the IMF and the criticism it has elicited.

5.1 IMF Strategy

Through its support to programmes in Thailand, Indonesia, and Korea the IMF assumed a central role in the resolution of the crisis. Malaysia and the Philippines did not take part in these IMF-supported programmes. Malaysia did not seek special assistance from the IMF and the

Philippines had already embarked on an IMF arrangement before the crisis broke out. A separate box summarises the policy developments in these two countries.

The IMF-supported programmes were based on a three-pronged strategy, which, first and foremost, aimed at restoring confidence. The IMF programmes consisted of:

(1) significant adjustments in macroeconomic policies;
(2) extensive financial support; and
(3) a comprehensive agenda of economic and structural reforms.

Each of these components will be discussed in turn.

To prevent a further collapse of exchange rates, the IMF demanded a significant tightening of ***monetary policy*** during the early stages of the crisis. Owing to the many corporate and financial weaknesses and the loss of confidence after the initial depreciations, devising the right monetary policy reaction was challenging (Boorman *et al*., 2000). On the one hand, interest rates had to be raised significantly to relieve downward pressure on exchange rates and to prevent the attendant depreciation-inflation spirals. Given the large unhedged foreign currency liabilities, firms were heavily exposed to the effects of large depreciations. On the other hand, firms and financial institutions were also vulnerable to increases in interest rates. In the face of high debt-to-equity ratios and structural weaknesses, higher interest rates could thus undermine real economic activity.

Monetary policy was not geared towards any specific target or range for the exchange rate, but was instead aimed at avoiding further spells of rapid depreciation. Rather than relying on foreign exchange interventions, authorities focussed on the use of interest rate and credit policies.

The implementation of these restrictive measures differed between the crisis countries and in some cases left much to be desired. Korea was reluctant to raise interest rates initially and only did so when the crisis seriously started to take its toll towards the end of 1997. Thailand and Indonesia did—after considerable hesitation—tighten monetary policy but eased interest rates too soon, resulting in a stop-and-go policy. Eventually only Korea and Thailand did pursue the right policy course. Large depreciations were prevented and after exchange rates stabilised, interest rates returned to pre-crisis levels.

The Indonesian experience, in contrast, was far from perfect. Monetary control was completely lost amidst growing political turmoil and the near-collapse of the banking system. To prevent the payment system from breaking down, Bank Indonesia provided massive liquidity support to failing banks. The resulting monetary and credit expansion fuelled a dramatic depreciation of the rupiah and a surge in inflation.

Predicated on the assumption that economic growth would slow down but remain positive, the IMF-supported programmes initially prescribed a certain degree of fiscal restraint. ***Fiscal policy*** was aimed at running budget surpluses, thereby creating enough leeway to contribute to the adjustment of the current account and to finance the restructuring of the financial sector. Fiscal policy was to be held firm in Indonesia and Korea, while in Thailand the adjustment was to be stronger given its larger current account deficit and the previous deterioration of its fiscal position.

After it became apparent that the effect of the crisis on domestic demand was larger than anticipated, fiscal policy was eased to support economic activity. The dramatic fall in output and the sharp currency depreciations had weakened the crisis countries' fiscal positions and improved their current account positions. Fiscal policy turned expansionary in early 1998, leading to a further deterioration of government finances.[22]

The second component of the IMF-supported programmes consisted of large ***financial assistance packages***. As can be seen in table 5.1 official financial support, especially in Indonesia and Korea, was exceptionally large. The IMF had committed $35 billion, while other sources had pledged an additional $77 billion.

Table 5.1 Official Financial Support Packages (billions of US dollars)

	Indonesia	**Korea**	**Thailand**	**Other Recent Packages**	Total
Multilateral sources	18.1	35.5	6.7	Argentina (1995)	4
IMF	10.1	21.1	4.0	Mexico (1995)	47
World Bank and ADB	8.0	14.2	2.7	Russia (1998)	22
Bilateral sources	18.0	23.1	10.5	Brazil (1998-1999)	40
Total	**36.1**	**58.4**	**17.2**	Argentina (Dec 2000)	20
				Turkey (Dec 2000)	10
				Turkey (May 2001)	19
				Brazil (Aug 2001)	15

Sources: Figures for Indonesia, Korea, and Thailand were drawn from Boorman *et al*. (2000). Other packages were obtained from http://www.brettonwoods.org/Appendices.PDF.

This financial support was meant to restore confidence and thus halt private capital outflows. The disbursement of official financing was far from sufficient to cover the amount of debt falling due during the first six months of the crisis (Boorman *et al.*, 2000). Yet, the original idea had been that the broader programmes (*i.e.* the policy actions discussed above and the planned structural reforms) in combination with the pledged official support would be sufficiently

[22] Boorman *et al.* (2000) and Lane *et al*. (1999) point out that the net effects of these policy measures were expansionary only in Thailand and Malaysia. In Indonesia policy measures aimed at limiting the expansion of the fiscal deficit resulting from the worsening economic environment. Fiscal policy was expansionary in Indonesia only in 1999-2000.

successful in restoring confidence such that private sector creditors would be disposed to continue rolling over their loans. However, confidence was not restored quickly, and the envisaged favourable market response did not materialise.

There is also a clear discrepancy between the amount of official funds that was announced and the amount that was actually disbursed. This is partly explained by the nature of IMF support, which is generally phased and conditional on the implementation of its programmes. Although financing was heavily front-loaded, at the end of March 1999 about 75% of official funds had been disbursed to Thailand, and only 50% and 40% had been paid out to Korea and Indonesia respectively (Boorman *et al.*, 2000). At the end of October 1998 none of the financing by bilateral sources (the 'second lines of defence') had been disbursed to Korea and Indonesia (Lane *et al*., 1999).

Confronted with continuing private capital outflows, the three programme countries all resorted to more direct action to involve the private sector in the resolution of these financing gaps. Whereas Thailand had at an early stage already obtained assurances from Japanese banks that they would continue rolling over maturing short-term debt, Korea and Indonesia had not made such arrangements at the start. Korea reached an agreement with creditor banks on the maintenance of credit lines only in December 1997. This deal was complemented in April 1998 with an agreement to restructure the short-term debt of 33 Korean banks. Indonesia negotiated an agreement with private creditors on the restructuring of corporate and banking debt in June 1998.

The third component of the IMF strategy entailed a comprehensive set of ***structural reforms*** of the financial and corporate sector. These reform programmes were considered a turning point in IMF strategy, which had traditionally emphasised macroeconomic imbalances rather than structural deficiencies. The reforms focused on taking immediate action to stem the crisis and on tackling underlying flaws to minimise the likelihood of recurrence. The implementation of the reform packages has, however, generally been slow.

Measures intended to strengthen the financial sector involved the closure of insolvent financial institutions and the recapitalisation of the financial system. Although the idea had been to rely on the private sector to inject capital into the financial system, the growing severity of the problems called for greater government involvement. Financial sector restructuring agencies and asset management companies were created to rid the financial sector of its worst problems.[23] Measures were also taken to strengthen the regulatory and supervisory framework, including improvements in accounting and auditing standards, and tighter prudential regulation.

[23] Asset management companies are centralised government agencies that purchase (often at a discount) non-performing loans from commercial banks, and subsequently sell these assets to the private sector. An asset has been resolved when it has been restructured or sold.

Reforms in the corporate sector aimed at improving corporate governance, as well as resolving the corporate debt problem.

The structural reform programmes also paid attention to other issues such as increasing transparency in government, improving market efficiency and competition, and enhancing the liberalisation of external trade and capital flows. With the deepening of the crisis, reforms in social sector policies also assumed growing importance.

Policy Response in Malaysia and the Philippines [a]

Malaysia and the Philippines did not participate in any IMF-supported programme in reaction to the crisis. Malaysia's macroeconomic conditions were substantially more favourable at the start of the crisis than those in the three crisis countries that did follow IMF-supported programmes (Thailand, Indonesia, and Korea). Moreover, with a relatively strong financial position and a comparatively well-developed regulatory framework, it did not face the pervasive banking and corporate problems that were present in the other countries.

Malaysia's reaction to the crisis was broadly similar to that in the three most affected countries. It initially responded with sharply higher interest rates and contractionary fiscal policy. However, interest rates were soon allowed to fall and the government resorted to more direct measures to tighten monetary conditions. Of the Asia-5 countries, Malaysia adopted the tightest fiscal stance and waited longest with its relaxation. In line with the other crisis countries, Malaysia also implemented various measures to reform its corporate and financial sectors.

The most striking feature of Malaysia's response to the crisis is the imposition of wide-ranging capital controls in September 1998. The controls were accompanied by the pegging of the ringgit to the US dollar and were later replaced by an exit levy. Although these capital controls have been heavily criticised, they do not appear to have had any significant effect on economic outcomes (Boorman, *et al.*, 2000), in part because most of the speculative outflows had already abated by the time the controls were introduced.

The Philippines already participated in an IMF arrangement at the start of the crisis. It had successfully implemented several macroeconomic adjustment programmes and structural reforms prior to the crisis and was thus in a good position to act decisively. The existing IMF-supported programme was extended and augmented and monetary and fiscal policy were initially tightened but were later eased to support recovery.

[a] This box draws on Boorman *et al.* (2000).

5.2 Criticism

The IMF-supported programmes in East Asia have been criticised on several counts. Although such a debate is inherently plagued by the problem of the counterfactual—it is difficult to establish how events would have developed had a different approach been taken—and it is easy to criticise with the benefit of hindsight, it is useful to review the main arguments used in this discussion.

First, several critics argue that ***monetary policy*** was too tight and hence aggravated the crisis.[24] Rather than stemming currency depreciations and thus restoring confidence, higher interest rates have, critics claim, set in motion a vicious circle of bankruptcies and deteriorating real activity. Otherwise viable corporations found themselves unable to both service their existing debts and take out new loans. The ensuing bankruptcies caused severe distress in the banking sector and thus weakened the financial system. This, in turn, weakened confidence, encouraged capital flight and exacerbated currency depreciations. Thus, opponents argue, raising interest rates in the midst of a currency crisis is counterproductive.

Proponents of the IMF-supported programmes, on the other hand, maintain that loose monetary policy (and depreciating currencies) would have caused similar havoc by raising the real burden of the extensive unhedged foreign currency denominated debts, and that many of the observed problems are partly due to a lack of decisive action by the authorities. In addition, they point out that those countries that did tighten monetary policy (*i.e.* Thailand and Korea) saw their currencies stabilise and economies recover comparatively quickly, whilst Indonesia, which clearly failed to tighten monetary policy, suffered a sharply deteriorating crisis. Moreover, various observers highlight there is little evidence that monetary policy was *too* tight. Lane *et al.* (1999), for instance, show that interest rates were not excessively burdensome. Their calculations suggest that the effect of monetary tightening accounts for less than one-fourth of the downturn in Thailand and Korea from 1997 to 1998. The Dutch government deemed a tightening of monetary policies in Asia inevitable, yet acknowledged that it would hurt the corporate and banking sectors in the short run (Ministerie van Financiën, 1998).

Second, critics claim that, since the root of the crisis lay not in profligate government spending, ***fiscal policy*** was unnecessarily harsh and added to the contractionary force of the downturn. The crisis countries had generally been in good fiscal shape prior to the crisis, with relatively low public debt and no excessive deficits. In view of the recessionary effects of the crisis, it would have been more appropriate to run small budget deficits rather than to focus on achieving surpluses. Radelet and Sachs (1998a) note that the return of stability in currency markets coincided with the relaxation of the IMF fiscal targets.

The IMF concedes that in retrospect fiscal policy had initially been too tight and that its easing should have come earlier (IMF, 2000). Part of the problem lies in the unexpected severity of the recession, which undermined the assumptions on which the IMF fiscal targets were based and thus made them more restrictive than they were meant to be. Yet, Lane *et al.* (1999) question whether looser fiscal policies would have been effective in supporting economic activity. Expansionary fiscal policy was hampered by a lack of access to international credit and by the need to bring about current account adjustments through a reduction in

[24] See for instance Radelet and Sachs (1998b).

domestic absorption. Greater government spending may thus have placed a larger burden on the private sector.

A third point of criticism is directed at the nature and size of the ***financial assistance packages***. Some have argued that, because the loan packages were phased and contingent on the progress of reform, they were insufficient to bolster market confidence. Radelet and Sachs (1998a, p. 66), for instance, emphasise that "announcing large sums of money that are not readily available for short-term support is unlikely to stop a creditor run." Moreover, the IMF relied too heavily on the willingness of creditor banks to roll over their loans. Others have claimed that the packages were in fact too large and that they induced moral hazard by creating expectations of a bail-out.

The IMF has refuted these arguments by pointing out that there is no compelling evidence that the programmes did result in moral hazard. Even so, moral hazard may be the lesser evil if the alternative is leaving crisis countries to their own devices (Corsetti *et al*, 1998b). The Fund does acknowledge that the programmes were not adequately financed, and that measures should be taken to ensure greater private sector involvement in the resolution of future crises. The Dutch government had already argued in favour of greater participation of commercial creditors in footing the bill of future crises. It has also pointed out that, given the circumstances and the risks associated with the spread of the crisis, the large support packages were the only sensible option (Ministerie van Financiën, 1998).

Finally, some have criticised the IMF for being too intrusive. The ***structural reforms***, they argue, are beyond the IMF's mandate and may in fact have added to the crisis. Radelet and Sachs (1998a) argue that the IMF's focus on these structural and institutional issues weakened market confidence because they were not part of the problem and distracted attention from the crisis itself. Opponents have also claimed that, by inciting widespread panic, the closure of insolvent banks led to runs on solvent banks. The reforms have also been criticised for being too large an adjustment burden at a time of economic distress.

The IMF, in response, points out that structural weaknesses were at the root of the crisis and that thus any programme that would not address these issues would have stood little chance of success. Solely treating the symptoms, without addressing the disease itself would have been irresponsible and ineffective. The structural reforms on the one hand, and the macroeconomic adjustment and financial packages on the other, were strongly complementary, with the effectiveness of the one strongly dependent on the other.

The cause of the panic that followed the closure of insolvent banks lies, according to the IMF, not in the closures themselves but in the lack of adequate preventive measures, especially in Indonesia. The Indonesian government guaranteed only a limited amount of deposits and had

not widely publicised this. While insolvent institutions were also closed in Thailand and Korea, it did not engender a panic of similar magnitude in these countries.

6 Recovery

Recovery from the Asian financial crisis was unexpectedly rapid, with all the Asia-5 countries reporting positive growth rates in 1999 (figure 4.2). The recovery primarily reflects the pick-up of private domestic consumption and, above all, exports rather than investment, which has remained rather subdued and only recently shows tentative signs of revival. The crisis countries have greatly reduced their external debt and their current account positions have moved into healthy surpluses. Whilst the pay-off of short-term foreign debt initially resulted in capital account deficits, net private capital flows to the five crisis-affected countries have in recent years been positive again. Moreover, most countries have now moved to a more flexible exchange rate regime and have accumulated a substantial stock of foreign exchange reserves, thereby further reducing their vulnerability to external shocks.

In addition to achieving these macroeconomic improvements, the crisis countries have also advanced with their structural reforms. By the end of 2003, all the crisis economies had completed their IMF-supported programmes. The ratio of non-performing loans to total loans in the financial system has come down considerably since the height of the crisis. Asset management companies, and to a lesser extent voluntary corporate workouts, have played an important role in realising these reductions. The capital positions of commercial banks have also improved in recent years, largely as a result of recapitalisation programmes and market consolidation.

However, the ADB (2003) notes that, although the stock of real credit to the private sector is on the rise, banks in the crisis countries still generate fewer loans from their deposits than they did before the crisis.[25] Goderis (2002) is also cautious. The tight relationship between banks and corporations complicates the restructuring process and corporate vulnerability is still high. For instance, with the exception of Korea and to a smaller degree Thailand, the corporate sector has made little progress with reducing its high debt-to-equity ratios. Both Goderis (2002) and ADB (2003) emphasize that, in order to further reduce systemic risk, faster progress needs to be made in the restructuring of the corporate sector. A stronger legal framework for bankruptcies and improved prudential oversight are among the priorities. Krueger (2004), noting that a move towards equity and bond financing would reduce reliance on the banking sector, highlights the need to deepen financial markets. Thus, while macroeconomic vulnerability to external shocks

[25] Banks in the Philippines are an exception.

has been greatly reduced and banks' balance sheets have improved, much still remains to be done before the process of structural and institutional reform is complete.

To what extent did the Asian crisis have a permanent impact on the crisis economies? Cerra and Saxena (2003) analyse whether the *level* of output has reverted to its initial trend line (in which case the output reduction would be temporary), or alternatively, whether output has been permanently reduced.[26] They find that all countries have experienced a permanent loss of output. Despite the quick recovery, output growth has failed to bring the level of output back to its original path. Barro (2001), looking at real stock market prices, also concludes that, from the perspective of financial markets, the financial turmoil in Southeast Asia has had permanent adverse effects.

7 Lessons

The financial crises of the 1990s (Mexico 1994-95, Asia 1997-98, Russia 1998, Brazil and Ecuador 1999) and more recently those of Turkey and Argentina (2001-02) have provided fertile input for the debate on the strengthening of the *international financial architecture*. This debate revolves around two themes: crisis prevention and crisis management. Major topics include enhancing transparency and surveillance; developing standards and codes; restructuring the financial sector; involving the private sector in crisis resolution; and redesigning IMF facilities. The merits of fixed exchange rates and capital controls are also held up to the light.

By giving an overview of the debate on the international financial architecture, this section examines the lessons drawn from the Asian crisis in a broader context. Many of the lessons from Asia act prominently in the discussion, as is reflected in a number of reform proposals.

7.1 Crisis Prevention

An important ingredient in the prevention of future crises is the adequate provision of data and other relevant information. Greater ***transparency*** not only allows a better assessment of risks and weaknesses, it also exerts a disciplinary affect on policymakers and market participants alike (DNB, 2000a). To this end, the IMF introduced the *Special Data Dissemination Standard* in 1996, which includes a guideline for the publication of 17 macroeconomic indicators. It was expanded in response to the Asian crisis to include measures of net usable international reserves and external debt. The IMF itself has become more transparent too. Most of the IMF-reports,

[26] Their analysis covers Hong Kong, Indonesia, Korea, the Philippines, Malaysia, and Singapore. Thailand was not included due to data limitations.

such as its Article IV Consultations, are now voluntarily made public and the Fund encourages its member-states to publish their Letters of Intent.[27] However, although these developments signify a move forward, they have shown to be insufficient to prevent new crises.

In the wake of the financial crises of the past decades, the Fund has expanded the coverage of its ***surveillance*** role. It now also includes financial sector and institutional issues, as well as an assessment of the vulnerabilities stemming from international capital flows. The scope of IMF-surveillance has thus become much broader and now extends far beyond its original mandate. The Dutch government is critical of this development. It has argued that the Fund should focus on essential issues that correspond to its core working field. Although this Dutch proposal (the Wijnholds-criteria) was rejected, the IMF has been receptive to concerns that it is overstretching its mandate and expertise. The Fund adopted a new guideline for surveillance in 2002, which sets priorities on the basis of macro-relevance.[28]

Regulatory ***standards and codes*** have also been improved and extended. International authorities have drafted various codes of good practices, covering areas such as monetary and financial policy, fiscal policy, accounting, banking supervision, and securities regulation. To evaluate the extent to which these standards are in fact implemented and to further stimulate compliance, the IMF writes *Reports on the Observance of Standards and Codes*. In many cases these evaluations are made available to the public.

The experience from East Asia has also shown that a healthy ***financial system*** is crucial to maintain financial stability. Shortly after the Asian crisis the IMF and the Worldbank introduced joint *Financial Sector Assessment Programs*, which aim to identify strengths and weaknesses of member-states' financial systems and offer advice and assistance in addressing potential deficiencies. Another innovation is the *Financial Stability Forum*. This forum, which was initiated by the G7 in 1999, concentrates its efforts on strengthening the global financial system.

In response to the Asian crisis, the IMF introduced ***Contingent Credit Lines*** (CCL), a precautionary facility intended to prevent the spread of financial crises to countries with strong economic policies and sound financial systems. Eligibility is restricted to countries that have received a seal of approval for their policies, the idea being that this will preserve market confidence. This marks a departure from the Fund's traditional lending approach, which in the past had focused restoring, rather than maintaining, stability. The CCL were abolished, as

[27] A Letter of Intent accompanies a country's request for IMF-financing. It describes the country's intended policy programme and the conditions upon which (further) financing is made available.
[28] See also Spijkerman and Teunissen (2001).

planned, at the end of 2003. Not a single country had used the facility, in part because it was feared that a request for a CCL would be seen as a sign of weakness.

The Asian crisis has intensified research on ***early warning system*** (EWS) models. By identifying the determinants of economic crises and measuring a country's vulnerability to a potential crisis, EWS models can be useful instruments in the prevention of future crises (see box). However, for policymakers to be able to actually ward off an impending crisis, an EWS needs to be of a sufficiently forward-looking nature to provide room for timely proactive measures. This is where the difficulty lies: it is very hard for these models to reliably predict *when* a crisis will actually occur. Moreover, ringing the alarm bells could trigger a crisis itself that might otherwise not have occurred.

7.2 Crisis management

Two topics take centre stage in the debate on the resolution of crises: an international lender of last resort (LOLR) and greater private sector involvement. Mishkin (1999) argues there is a strong rationale for an ***international LOLR***.[29] Although central banks act as lender of last resort to prevent the collapse of the domestic financial system, emerging market institutional features may hamper an effective resolution of a crisis. To the extent that these countries have a history of high inflation, expected inflation may rocket if the central bank provides massive liquidity support or loosens monetary policy. This would lead to higher interest rates, exchange rate depreciation, and, given that emerging market debt is often denominated in foreign currency and carries short maturity, a substantial deterioration of firms' and banks' balance sheets and cash flows. There is, in this view, a strong case for an international LOLR because the support it provides would not lead to higher inflation. Moreover, by averting speculative attacks it could play an important role in preventing contagion to other emerging markets.

[29] One could argue that the IMF—in collaboration with the Worldbank and the major industrialised countries—already plays the role of an international LOLR. An important distinction between the IMF and a domestic LOLR is, however, that domestic central banks can create high-powered money without limit, whereas the IMF cannot create international reserves. It can issue Special Drawing Rights, but these are a *potential claim* on the freely usable currencies of IMF members. Moreover, most central banks have independent authority and hence can generally act swiftly. Actions by the IMF, on the other hand, require the approval of its Executive Board (Schwartz, 1999). The IMF introduced the *Supplemental Reserve Facility* in December 1997, which goes some way towards international LOLR lending. It is designed to meet a need for large-scale short-term financing resulting from a loss market confidence. It is, however, only provided when certain conditions are met. Approval depends, for instance, on the amount of financing provided by other (both official and private) creditors.

Predicting Crises: Early Warning Systems

Early warning system models (EWS) consist of a set of indicators that measure vulnerability to a crisis.[a] Widely used indicators include real exchange rate overvaluation, reserve adequacy, foreign reserves growth, domestic credit growth, export growth, and current account. The Asian crisis has raised greater attention for variables that reflect the state of corporate balance sheets (leverage, maturity structure) and institutional factors (capital account openness, banking supervision, depositor safety, political instability). There is also a growing interest in modelling financial market linkages that capture the transmission of shocks across currency, security, and credit markets.

Three broad approaches can be discerned. First, *leading indicator models* examine a number of variables and transform them into discrete (binary) signals. Once a given threshold has been crossed the model is said to call a crisis. The downside of these models is that they involve a loss of information, since they do not show the *extent* to which variables have moved into the critical zone (Bussière and Fratzscher, 2002). Second, *limited dependent variable probit/logit models* have the attractive feature that they capture the non-linear effects of explanatory variables on the crisis indicator. A given deterioration in reserve adequacy, for instance, may be more worrying if the result is that reserves no longer cover short-term debt, compared to a situation where they already failed to do so in the first place (Bussière and Fratzscher, 2002). A third type of models uses a *continuous* index to anticipate the severity of a crisis. The Dutch central bank, for instance, developed a model which yields both a probability of a crisis and its expected intensity. The former is best explained by indicators of country solvability and liquidity, while the latter is explained by contagion effects and reserve adequacy (DNB, 2000b).

In addition to monitoring a number of external models, the IMF operates two 'in-house' EWS models.[b] These models, the *Developing Country Studies Division* (DCSD) model and the (modified) *Kaminsky, Lizondo, and Reinhart* (KLR) model, forecast exchange market pressure over a 24-month horizon using a summary binary indicator of crisis vulnerability. The models differ in their econometric methodology. In short, the DCSD model uses a multivariate panel probit regression technique (5 explanatory variables) to estimate the probability of a crisis within 24 months. If this probability exceeds a critical value, the model calls a crisis. The KLR model, in contrast, first examines each explanatory variable individually—if a variable exceeds a given threshold it sends a signal—and then constructs a composite crisis index. On the basis of past performance, the model subsequently assigns a probability of a crisis for each value of this aggregate index. The model gives a crisis warning if the corresponding probability exceeds an optimal threshold.

The empirical performance of EWS models is mixed. Most models are significant predictors of actual crises but still generate considerable errors. They suffer the common statistical faults: they provide false alarms in the sense that they predict a crisis where none has actually occurred (so-called type I errors), and they fail to predict crises that did occur (type II errors). The challenge is to balance these errors such that the welfare costs they entail are minimised.[c] It is important to realise that EWS models are complementary to, not a substitute for, comprehensive country-risk surveillance and intensive policy dialogue.

[a] The focus of this box is on currency crises.

[b] Also see IMF (2002).

[c] See for instance Bussière and Fratzscher (2002). It is difficult to estimate these welfare costs. False alarms may, for instance, reflect pre-emptive policy measures in a situation where vulnerability was indeed high. In those cases 'false' alarms should rather be seen as an indicator of success. Failed alarms (*i.e.* missing a crisis) may be very costly if the crisis could have been prevented by a timely signal. Yet, making the models more sensitive—in the sense that they would emit signals sooner—may also be costly, if a signal weakens confidence or causes a speculative attack and thus triggers a crisis itself.

Mishkin (1999) stresses that the operation of an international lender of last resort should be guided by four principles. First, emergency funding should not be provided unconditionally; it should be accompanied by efforts to strengthen regulatory and supervisory systems to restore confidence. Second, the faster liquidity is provided the better. This means that conditions for access to credit facilities should be set beforehand rather than negotiated at the time of crisis. Third, to adequately deal with a financial crisis, balance sheets of both financial and non-financial firms should be restored. Fourth, since an international LOLR creates serious moral hazard problems, it should be used only very infrequently and come with measures to reduce these perverse incentives.

These points illustrate the problem with the concept of an international LOLR: its required regulatory and supervisory powers may impinge on the sovereignty of national governments and may thus be met with considerable resistance. Moreover, it is difficult to distinguish between illiquid and insolvent countries. Only the former should be given unlimited support; the latter demands restructuring and adjustment (ADB, 1999). Another issue is that of resources. The IMF, which would be the obvious candidate for international LOLR, does not have the amount of resources that may be required. Unlike central banks, which can provide unlimited liquidity assistance, the Fund cannot print money and thus depends on the contributions from member-states for it to a credible LOLR.

The problems associated with moral hazard and limited availability of official resources would partly be met by relying more heavily on ***private sector involvement*** in the resolution of crises.[30] The bailing-in of private creditors can be achieved through encouraging them to agree on, for instance, the suspension of payment during a stand-still period, allowing a roll-over or a lengthening of maturities, and interest or debt reductions (Kawai *et al.*, 2001). Another option is that the IMF 'lends into arrears', *i.e.* provides financing to governments that have halted their debt payments to private creditors, but are on track in terms of policy adjustment and their efforts to reach an agreement with creditors. This would signal that the country deserves support, and would thereby facilitate private sector involvement and an orderly work-out. While there is agreement on the need for greater private sector involvement, there is no well-defined approach. The International Monetary and Financial Committee agreed on a framework for private sector burden sharing in Prague in 2000, but its implementation in the recent case of Argentina—inclining towards default rather than co-operation—has not been satisfactory. This framework favours a voluntary approach, but recognises that in some cases more coercive measures might be warranted. If a crisis country has prospects of a relatively easy return to international capital markets, a combination of catalytic financing by the IMF and policy adjustment could be enough.

[30] The Dutch Ministry of Finance (Ministerie van Financiën, 2003) believes that the IMF should not act as an international LOLR and therefore deems this 'bailing-in' of private creditors essential in the management of crises.

Other potentially useful instruments in crisis resolution are ***collective action clauses*** (CACs) in bond issues. These arrange the collective representation (by a qualified majority) of bond-holders of a particular issue and prevent 'holdout' by dissident creditors. CACs could thus make it easier to reach debt-restructuring agreement. Even though CACs were already endorsed by the 1996 Rey Report, there has been little progress in their practical application. This partly reflects concerns in emerging markets that they would lead to higher borrowing costs. To promote their wider use, members of the European Union agreed in 2002 to include them into their bonds issued under foreign law. In April 2003 both Mexico and Brazil issued bonds that included CACs. Others, such as Korea and Uruguay have followed.[31] There is no evidence of a market premium for the use of CACs.

The proposal by the IMF's First Deputy Managing Director Anne Krueger for a ***Sovereign Debt Restructuring Mechanism*** (SDRM) has also received a considerable amount of attention. It has features similar to CACs but goes much farther. The SDRM would cover the whole stock of existing debt—not just bonds of a particular issue—and would apply to all countries at the same time, thereby avoiding the 'first-mover' problem associated with CACs.[32] By providing a predictable framework for dealing with unsustainable sovereign debt, the SDRM would allow the IMF to focus its efforts on countries with liquidity problems. The proposal was, however, side-lined in 2003.

7.3 Rethinking Exchange Rate Regimes and Capital Flows

The events in Asia have rekindled the debate on the appropriate ***exchange rate regime*** for emerging markets. As the Asian financial crisis has shown, pegged or nearly-pegged exchange rates can be highly crisis-prone, certainly for countries with large amounts of foreign currency-denominated debt or a weak banking system. Although pegged exchange rates provide a nominal anchor that may help curb inflation, and reduce volatility in thin foreign exchange markets, the danger is that the perceived absence of exchange rate risk will encourage undue risk taking and result in excessive capital inflows. Once credibility has been shattered and the peg can no longer be defended, the fall in the exchange rate is often much larger and the economic adjustment more severe than would have occurred had the currency been allowed to float freely.

Increasingly, the widely-shared belief is that only the extremes of the spectrum of exchange rate regimes are suitable for emerging economies. Either they should let their currencies float

[31] At the end of 2002, roughly 30% of international sovereign bonds issued by emerging markets included CACs.

[32] The use of CACs is a *contractual approach*: CACs cover only the contracts (bond issues) to which they are applied. The SDRM, in contrast, is a *statutory approach*: it would be laid down in the IMF's Articles of Agreement. Hence, universality would be guaranteed.

freely or they should adopt 'hard pegs', such as currency boards or even official dollarisation. Given the potential volatility of capital movements, intermediate regimes would no longer be tenable, since capital would flee the currency at the slightest hint of devaluation. Of the two polar cases, flexible exchange rates are generally seen as the preferred option. Currency boards, for instance, require a decision about the rate at which to fix the domestic currency and, more importantly, may even increase domestic financial instability since the central bank can no longer act as a LOLR (Velasco, 2000). Flexible exchange rates, on the other hand, can act as a cushion to external shocks and provide monetary policy autonomy.[33]

Of the five countries most heavily affected by the Asian crisis, only Malaysia now operates a conventional pegged arrangement (to the US dollar). The others have (*de jure*) adopted a flexible regime: Korea and the Philippines have an independently floating exchange rate, while Thailand and Indonesia operate a managed float. In practice, as is hinted in the following box, exchange rate regimes may be more rigid than suggested by the these official classifications.

Interveners and fixers?

The recent criticism that Asian economies are conducting increasingly rigid or "competitive" exchange rate policies and are accumulating vast amounts of foreign exchange reserves[a] seems justified not only in the cases of China and Japan, but to a certain extent also in that of the former crises countries. Both China and Japan have allowed their stocks of foreign exchange reserves to expand markedly; the former by keeping its exchange rate rigidly fixed to the US dollar, the latter by containing the upward pressure on its currency.

Similarly, since the end of January 2002, foreign exchange reserves have increased by about 43% in Korea and Malaysia and by about 23% in Indonesia and Thailand. This is due to current account surpluses, and in the case of Korea also to large net capital inflows. Over the same period, the US dollar value of the won and baht increased by about 10% and the rupiah by double that. Malaysia has held its currency fixed to the US dollar since September 1998. Presumably, East Asian exchange rates would have appreciated more strongly if monetary authorities had overcome their 'fear of floating' and exchange rates were truly allowed to move freely. The Philippines, on the other hand, saw the US dollar value of the peso fall by 8%. Foreign exchange reserves declined by approximately 5%.

[a] See for instance Wolf (2004a, 2004b).

The Asian financial crisis also provides valuable lessons about ***financial liberalisation*** in emerging markets. It suggests that liberalisation of domestic financial markets should follow, rather than outpace, the development of adequate regulatory and supervisory institutions. A strong financial sector and sound macroeconomic policies are prerequisites for prudent financial liberalisation. The liberalisation process itself should also be carefully sequenced. In particular, FDI and other long-term capital flows which are strongly associated with growth and

[33] See Rajan (2002) for a discussion of exchange rate arrangements for Southeast Asia. He takes issue with the recommendation that developing countries should move away from intermediate exchange rate regimes and favours a (flexible) currency basket arrangement for Southeast Asia.

investment should receive early attention, while volatile short-term cross-border debt flows which are prone to speculation should be the last item on the list.[34] The Chilean experience with unremunerated reserve requirements of one year on all portfolio foreign capital inflows suggests that this type of capital controls may be effective in discouraging volatile short-term capital inflows without reducing aggregate capital inflows.

A more contentious issue is the restriction of capital outflows. Controls on capital outflows may be a component of crisis management, but their imposition could create new problems. Although controls on outflows allow policy makers to reduce interest rates without setting off a devaluation of the domestic currency, they create serious distortions and misallocations and may even worsen market sentiment. Kawai *et al.* (2001) do not reject the use of controls of capital outflows in general, but suggest that their merits should be evaluated in the context of the circumstances.

8 Concluding Remarks

With the benefit of hindsight, one might argue that the IMF's policy response to the crisis, and its implementation by the crisis countries, has not always been appropriate. In a similar vein, one could claim that the crisis could have been prevented had macroeconomic policies been sounder and regulation and supervision been more prudent. Looking back on major financial crises in the 1990s, Lawrence Summers (IMF, 2004, p. 47) recently noted that in each of these cases, countries "made very active efforts to dine with the devil (speculators) and ended up on the menu."

Be that as it may, the Asian crisis offers valuable lessons, and many of these have been taken to heart. For instance, the IMF has taken a more balanced approach to capital account liberalisation.[35] It has recognised that its campaign for capital account liberalisation in Korea was inappropriate; the Fund now supports a more cautious approach in China. Likewise, it agreed to capital restrictions in Uruguay to stem its crisis in 2002.

Yet, it is important to realise that the resolution of financial crises is often as much about politics as it is about economics. Designing the right policy response is vital, yet garnering support to secure its implementation is just as crucial. Institutions matter too. Without a well-

[34] Analysing past experiences with capital account liberalisation, the IMF (2001) concludes that the *pace* of reform has no systematic effect on the likelihood of a crisis. Furthermore, a particular *sequencing* of the liberalisation process does not—by itself—appear to be sufficient to avoid a crisis. Of far greater importance to successful capital account liberalisation are *financial sector stability* and *stable macroeconomic policies*.

[35] Also see Ministerie van Financiën (2004).

functioning (economic and political) institutional structure, well-meant policies may turn out to be rather powerless.

It can (and should) not be denied that the international financial arena is in a constant state of flux. Although the actors have largely remained the same, some have evolved from being merely an extra into a main figure, acting centre-stage. Emerging market countries have assumed a greater role, some under more auspicious circumstances than others. Increasing integration with global (financial) markets offers new opportunities, but also poses challenges. One of the challenges for policy-makers is to not only learn from past experiences, but to also be ahead of future developments.

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